7.1.8. Conducted Power Measurement Results(LTE Band 7)

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Tune Up (dBm)
Band7	5MHz	QPSK	20775	1RB#0	21.12	22.00
Band7	5MHz	16QAM	20775	1RB#0	20.87	21.00
Band7	5MHz	QPSK	20775	1RB#12	21.31	22.00
Band7	5MHz	16QAM	20775	1RB#12	20.44	21.00
Band7	5MHz	QPSK	20775	1RB#24	20.82	21.00
Band7	5MHz	16QAM	20775	1RB#24	20.45	21.00
Band7	5MHz	QPSK	20775	12RB#0	20.77	21.00
Band7	5MHz	16QAM	20775	12RB#0	20.04	21.00
Band7	5MHz	QPSK	20775	12RB#6	20.65	21.00
Band7	5MHz	16QAM	20775	12RB#6	19.85	20.00
Band7	5MHz	QPSK	20775	12RB#13	20.68	21.00
Band7	5MHz	16QAM	20775	12RB#13	19.90	20.00
Band7	5MHz	QPSK	20775	25RB#0	20.71	21.00
Band7	5MHz	16QAM	20775	25RB#0	19.90	20.00
Band7	5MHz	QPSK	21100	1RB#0	21.03	22.00
Band7	5MHz	16QAM	21100	1RB#0	19.75	20.00
Band7	5MHz	QPSK	21100	1RB#12	21.21	22.00
Band7	5MHz	16QAM	21100	1RB#12	19.98	20.00
Band7	5MHz	QPSK	21100	1RB#24	21.19	22.00
Band7	5MHz	16QAM	21100	1RB#24	19.94	20.00
Band7	5MHz	QPSK	21100	12RB#0	20.18	21.00
Band7	5MHz	16QAM	21100	12RB#0	19.19	20.00
Band7	5MHz	QPSK	21100	12RB#6	20.19	21.00
Band7	5MHz	16QAM	21100	12RB#6	19.23	20.00
Band7	5MHz	QPSK	21100	12RB#13	20.26	21.00
Band7	5MHz	16QAM	21100	12RB#13	19.16	20.00
Band7	5MHz	QPSK	21100	25RB#0	20.17	21.00
Band7	5MHz	16QAM	21100	25RB#0	19.38	20.00
Band7	5MHz	QPSK	21425	1RB#0	20.89	21.00
Band7	5MHz	16QAM	21425	1RB#0	20.77	21.00
Band7	5MHz	QPSK	21425	1RB#12	21.48	22.00
Band7	5MHz	16QAM	21425	1RB#12	21.18	22.00
Band7	5MHz	QPSK	21425	1RB#24	21.24	22.00
Band7	5MHz	16QAM	21425	1RB#24	21.16	22.00
Band7	5MHz	QPSK	21425	12RB#0	21.13	22.00
Band7	5MHz	16QAM	21425	12RB#0	20.82	21.00
Band7	5MHz	QPSK	21425	12RB#6	21.12	22.00
Band7	5MHz	16QAM	21425	12RB#6	20.81	21.00
Band7	5MHz	QPSK	21425	12RB#13	21.35	22.00
Band7	5MHz	16QAM	21425	12RB#13	20.75	21.00
Band7	5MHz	QPSK	21425	25RB#0	21.24	22.00
Band7	5MHz	16QAM	21425	25RB#0	20.87	21.00
Band7	10MHz	QPSK	20800	1RB#0	20.81	21.00
Band7	10MHz	16QAM	20800	1RB#0	20.80	21.00
Band7	10MHz	QPSK	20800	1RB#24	20.86	21.00
Band7	10MHz	16QAM	20800	1RB#24	20.88	21.00
Band7	10MHz	QPSK	20800	1RB#49	20.87	21.00
Band7	10MHz	16QAM	20800	1RB#49	20.90	21.00
Band7	10MHz	QPSK	20800	25RB#0	20.90	21.00
Band7	10MHz	16QAM	20800	25RB#0	20.51	21.00
Band7	10MHz	QPSK	20800	25RB#12	20.90	21.00
Band7	10MHz	16QAM	20800	25RB#12	20.51	21.00
Band7	10MHz	QPSK	20800	25RB#25	20.95	21.00
Band7	10MHz	16QAM	20800	25RB#25	20.65	21.00
Band7	10MHz	QPSK	20800	50RB#0	20.92	21.00
Band7	10MHz	16QAM	20800	50RB#0	20.64	21.00
Band7	10MHz	QPSK	21100	1RB#0	21.99	22.00
Band7	10MHz	16QAM	21100	1RB#0	21.12	22.00
Band7	10MHz	QPSK	21100	1RB#24	22.14	23.00
Band7	10MHz	16QAM	21100	1RB#24	20.56	21.00
Band7	10MHz	QPSK	21100	1RB#49	22.04	23.00
Band7	10MHz	16QAM	21100	1RB#49	20.61	21.00

Band7	10MHz	QPSK	21100	25RB#0	21.21	22.00
Band7	10MHz	16QAM	21100	25RB#0	20.41	21.00
Band7	10MHz	QPSK	21100	25RB#12	21.13	22.00
Band7	10MHz	16QAM	21100	25RB#12	20.43	21.00
Band7	10MHz	QPSK	21100	25RB#25	21.18	22.00
Band7	10MHz	16QAM	21100	25RB#25	20.49	21.00
Band7	10MHz	QPSK	21100	50RB#0	21.25	22.00
Band7	10MHz	16QAM	21100	50RB#0	20.35	21.00
Band7	10MHz	QPSK	21400	1RB#0	20.72	21.00
Band7	10MHz	16QAM	21400	1RB#0	20.72	21.00
Band7	10MHz	QPSK	21400	1RB#24	21.03	22.00
Band7	10MHz	16QAM	21400	1RB#24	21.04	22.00
Band7	10MHz	QPSK	21400	1RB#49	21.61	22.00
Band7	10MHz	16QAM	21400	1RB#49	21.42	22.00
Band7	10MHz	QPSK	21400	25RB#0	20.91	21.00
Band7	10MHz	16QAM	21400	25RB#0	20.78	21.00
Band7	10MHz	QPSK	21400	25RB#12	20.90	21.00
Band7	10MHz	16QAM	21400	25RB#12	20.78	21.00
Band7	10MHz	QPSK	21400	25RB#25	21.45	22.00
Band7	10MHz	16QAM	21400	25RB#25	20.71	21.00
Band7	10MHz	QPSK	21400	50RB#0	21.17	22.00
Band7	10MHz	16QAM	21400	50RB#0	20.80	21.00
Band7	15MHz	QPSK	20825	1RB#0	20.82	21.00
Band7	15MHz	16QAM	20825	1RB#0	20.81	21.00
Band7	15MHz	QPSK	20825	1RB#38	20.73	21.00
Band7	15MHz	16QAM	20825	1RB#38	20.75	21.00
Band7	15MHz	QPSK	20825	1RB#74	20.53	21.00
Band7	15MHz	16QAM	20825	1RB#74	20.57	21.00
Band7	15MHz	QPSK	20825	38RB#0	20.78	21.00
Band7	15MHz	16QAM	20825	38RB#0	20.78	21.00
Band7	15MHz	QPSK	20825	38RB#18	20.78	21.00
Band7	15MHz	16QAM	20825	38RB#18	20.77	21.00
Band7	15MHz	QPSK	20825	38RB#37	20.77	21.00
Band7	15MHz	16QAM	20825	38RB#37	20.77	21.00
Band7	15MHz	QPSK	20825	75RB#0	20.76	21.00
Band7	15MHz	16QAM	20825	75RB#0	20.65	21.00
Band7	15MHz	QPSK	21100	1RB#0	21.79	22.00
Band7	15MHz	16QAM	21100	1RB#0	21.35	22.00
Band7	15MHz	QPSK	21100	1RB#38	22.02	23.00
Band7	15MHz	16QAM	21100	1RB#38	21.30	22.00
Band7	15MHz	QPSK	21100	1RB#74	21.50	22.00
Band7	15MHz	16QAM	21100	1RB#74	21.45	22.00
Band7	15MHz	QPSK	21100	38RB#0	21.28	22.00
Band7	15MHz	16QAM	21100	38RB#0	21.29	22.00
Band7	15MHz	QPSK	21100	38RB#18	21.29	22.00
Band7	15MHz	16QAM	21100	38RB#18	21.29	22.00
Band7	15MHz	QPSK	21100	38RB#37	21.29	22.00
Band7	15MHz	16QAM	21100	38RB#37	21.30	22.00
Band7	15MHz	QPSK	21100	75RB#0	21.30	22.00
Band7	15MHz	16QAM	21100	75RB#0	20.38	21.00
Band7	15MHz	QPSK	21375	1RB#0	20.87	21.00
Band7	15MHz	16QAM	21375	1RB#0	20.64	21.00
Band7	15MHz	QPSK	21375	1RB#38	20.86	21.00
Band7	15MHz	16QAM	21375	1RB#38	20.66	21.00
Band7	15MHz	QPSK	21375	1RB#74	21.26	22.00
Band7	15MHz	16QAM	21375	1RB#74	21.05	22.00
Band7	15MHz	QPSK	21375	38RB#0	20.99	21.00
Band7	15MHz	16QAM	21375	38RB#0	20.98	21.00
Band7	15MHz	QPSK	21375	38RB#18	20.97	21.00
Band7	15MHz	16QAM	21375	38RB#18	20.97	21.00
Band7	15MHz	QPSK	21375	38RB#37	20.97	21.00
Band7	15MHz	16QAM	21375	38RB#37	20.96	21.00
Band7	15MHz	QPSK	21375	75RB#0	20.96	21.00
Band7	15MHz	16QAM	21375	75RB#0	20.80	21.00
Band7	20MHz	QPSK	20850	1RB#0	20.88	21.00

Band7	20MHz	16QAM	20850	1RB#0	20.74	21.00
Band7	20MHz	QPSK	20850	1RB#49	20.66	21.00
Band7	20MHz	16QAM	20850	1RB#49	20.56	21.00
Band7	20MHz	QPSK	20850	1RB#99	21.35	22.00
Band7	20MHz	16QAM	20850	1RB#99	20.96	21.00
Band7	20MHz	QPSK	20850	50RB#0	20.66	21.00
Band7	20MHz	16QAM	20850	50RB#0	20.67	21.00
Band7	20MHz	QPSK	20850	50RB#25	20.66	21.00
Band7	20MHz	16QAM	20850	50RB#25	20.67	21.00
Band7	20MHz	QPSK	20850	50RB#50	20.86	21.00
Band7	20MHz	16QAM	20850	50RB#50	20.70	21.00
Band7	20MHz	QPSK	20850	100RB#0	20.76	21.00
Band7	20MHz	16QAM	20850	100RB#0	20.59	21.00
Band7	20MHz	QPSK	21100	1RB#0	21.85	22.00
Band7	20MHz	16QAM	21100	1RB#0	21.73	22.00
Band7	20MHz	QPSK	21100	1RB#49	22.03	23.00
Band7	20MHz	16QAM	21100	1RB#49	21.64	22.00
Band7	20MHz	QPSK	21100	1RB#99	21.91	22.00
Band7	20MHz	16QAM	21100	1RB#99	21.84	22.00
Band7	20MHz	QPSK	21100	50RB#0	21.21	22.00
Band7	20MHz	16QAM	21100	50RB#0	20.40	21.00
Band7	20MHz	QPSK	21100	50RB#25	21.23	22.00
Band7	20MHz	16QAM	21100	50RB#25	20.41	21.00
Band7	20MHz	QPSK	21100	50RB#50	21.23	22.00
Band7	20MHz	16QAM	21100	50RB#50	20.44	21.00
Band7	20MHz	QPSK	21100	100RB#0	21.23	22.00
Band7	20MHz	16QAM	21100	100RB#0	20.57	21.00
Band7	20MHz	QPSK	21350	1RB#0	21.18	22.00
Band7	20MHz	16QAM	21350	1RB#0	21.05	22.00
Band7	20MHz	QPSK	21350	1RB#49	20.73	21.00
Band7	20MHz	16QAM	21350	1RB#49	20.62	21.00
Band7	20MHz	QPSK	21350	1RB#99	21.64	22.00
Band7	20MHz	16QAM	21350	1RB#99	21.49	22.00
Band7	20MHz	QPSK	21350	50RB#0	20.86	21.00
Band7	20MHz	16QAM	21350	50RB#0	20.93	21.00
Band7	20MHz	QPSK	21350	50RB#25	20.86	21.00
Band7	20MHz	16QAM	21350	50RB#25	20.93	21.00
Band7	20MHz	QPSK	21350	50RB#50	21.12	22.00
Band7	20MHz	16QAM	21350	50RB#50	20.80	21.00
Band7	20MHz	QPSK	21350	100RB#0	20.98	21.00
Band7	20MHz	16QAM	21350	100RB#0	20.81	21.00

7.1.9. Conducted Power Measurement Results(Bluetooth)

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Tune Up (dBm)
NVNT	1-DH5	2402	Ant1	-0.67	0.00
NVNT	1-DH5	2441	Ant1	-0.42	0.00
NVNT	1-DH5	2480	Ant1	-1.33	-1.00
NVNT	2-DH5	2402	Ant1	1.12	2.00
NVNT	2-DH5	2441	Ant1	1.43	2.00
NVNT	2-DH5	2480	Ant1	0.39	1.00
NVNT	3-DH5	2402	Ant1	1.54	2.00
NVNT	3-DH5	2441	Ant1	1.87	2.00
NVNT	3-DH5	2480	Ant1	0.76	1.00

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Tune Up (dBm)
NVNT	BLE 1M	2402	Ant1	-0.43	0.00
NVNT	BLE 1M	2440	Ant1	1.15	2.00
NVNT	BLE 1M	2480	Ant1	0.17	1.00

7.2. Stand-alone SAR test evaluation

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and Product specific 10g SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

Freq. Band	Frequency (GHz)	Position	Average Power		Test Separation (mm)	Calculate Value	Exclusion Threshold	Exclusion (Y/N)
			dBm	mW				
Bluetooth	2.48	Head	2.00	1.58	5	0.499	3	Y
		Body-worn	2.00	1.58	5	0.499	3	Y

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
• f(GHz) is the RF channel transmit frequency in GHz
• Power and distance are rounded to the nearest mW and mm before calculation
• The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

7.3. SAR Measurement Results

The calculated SAR is obtained by the following formula:

Reported SAR=Measured SAR*$10^{(Ptarget-Pmeasured))/10}$

Scaling factor=$10^{(Ptarget-Pmeasured))/10}$

Reported SAR= Measured SAR* Scaling factor

Where

P_{target} is the power of manufacturing upper limit;

$P_{measured}$ is the measured power;

Measured SAR is measured SAR at measured power which including power drift)

Reported SAR which including Power Drift and Scaling factor

7.3.1. SAR Results[GSM 850]

SAR Values [GSM850]								
Ch/ Freq. (MHz)	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
							Measured	Reported
measured / reported SAR numbers – Head Test data								
128/824.2	GSM	Left Cheek	32.69	33.00	0.11	1.074	0.256	0.275
128/824.2	GSM	Left Tilt	32.69	33.00	-0.12	1.074	0.134	0.144
128/824.2	GSM	Right Cheek	32.69	33.00	0.15	1.074	**0.276**	**0.296**
128/824.2	GSM	Right Tilt	32.69	33.00	-0.11	1.074	0.148	0.159
measured / reported SAR numbers - Body Test data distance 5mm								
190/836.6	GPRS 3TS	Front side	29.52	30.00	-0.01	1.117	0.377	0.421
190/836.6	GPRS 3TS	Rear side	29.52	30.00	0.10	1.117	**0.483**	**0.539**
190/836.6	GPRS 3TS	Left side	29.52	30.00	0.03	1.117	0.154	0.172
190/836.6	GPRS 3TS	Right side	29.52	30.00	0.04	1.117	0.146	0.163
190/836.6	GPRS 3TS	Bottom side	29.52	30.00	0.20	1.117	0.369	0.412

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ⩽ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ⩽ 100MHz.
- ⩽ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ⩽ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ⩾ 200 MHz.

7.3.2. SAR Results[GSM 1900]

SAR Values [GSM1900]								
Ch/ Freq. (MHz)	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
							Measured	Reported
measured / reported SAR numbers – Head Test data								
661/1880	GSM	Left Cheek	29.71	30.00	-0.17	1.069	0.162	0.173
661/1880	GSM	Left Tilt	29.71	30.00	0.03	1.069	0.083	0.089
661/1880	GSM	Right Cheek	29.71	30.00	0.03	1.069	**0.175**	**0.187**
661/1880	GSM	Right Tilt	29.71	30.00	0.12	1.069	0.091	0.098
measured / reported SAR numbers - Body Test data distance 5mm								
661/1880	GPRS 3TS	Front side	26.48	27.00	-0.05	1.127	0.164	0.185
661/1880	GPRS 3TS	Rear side	26.48	27.00	0.16	1.127	**0.302**	**0.340**
661/1880	GPRS 3TS	Left side	26.48	27.00	-0.18	1.127	0.066	0.074
661/1880	GPRS 3TS	Right side	26.48	27.00	0.17	1.127	0.060	0.068
661/1880	GPRS 3TS	Bottom side	26.48	27.00	0.00	1.127	0.156	0.176

Note:
1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
- ⩽ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ⩽ 100MHz.
- ⩽ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ⩽ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ⩾ 200 MHz.

7.3.3. SAR Results [WCDMA Band II]

SAR Values [WCDMA Band II]								
Ch/ Freq. (MHz)	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
							Measured	Reported
measured / reported SAR numbers – Head Test data								
9538/1907.6	RMC	Left Cheek	23.58	24.00	-0.02	1.102	0.124	0.137
9538/1907.6	RMC	Left Tilt	23.58	24.00	0.19	1.102	0.068	0.075
9538/1907.6	RMC	Right Cheek	23.58	24.00	0.18	1.102	**0.132**	**0.145**
9538/1907.6	RMC	Right Tilt	23.58	24.00	-0.14	1.102	0.073	0.08
measured / reported SAR numbers - Body Test data distance 5mm								
9538/1907.6	RMC	Front side	23.58	24.00	0.07	1.102	0.175	0.193
9538/1907.6	RMC	Rear side	23.58	24.00	0.14	1.102	**0.243**	**0.268**
9538/1907.6	RMC	Left side	23.58	24.00	0.03	1.102	0.087	0.096
9538/1907.6	RMC	Right side	23.58	24.00	-0.11	1.102	0.082	0.090
9538/1907.6	RMC	Bottom side	23.58	24.00	0.18	1.102	0.166	0.183

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ⩽ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ⩽ 100MHz.
- ⩽ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ⩽ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ⩾ 200 MHz.

3. RMC* - RMC 12.2kbps mode;

7.3.4. SAR Results [WCDMA Band V]

SAR Values [WCDMA Band V]								
Ch/ Freq. (MHz)	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
							Measured	Reported
measured / reported SAR numbers – Head Test data								
4233/846.6	RMC	Left Cheek	23.54	24.00	-0.19	1.112	0.243	0.27
4233/846.6	RMC	Left Tilt	23.54	24.00	-0.06	1.112	0.159	0.177
4233/846.6	RMC	Right Cheek	23.54	24.00	0.17	1.112	**0.276**	**0.307**
4233/846.6	RMC	Right Tilt	23.54	24.00	0.16	1.112	0.142	0.158
measured / reported SAR numbers - Body Test data distance 5mm								
4233/846.6	RMC	Front side	23.54	24.00	-0.11	1.112	0.396	0.440
4233/846.6	RMC	Rear side	23.54	24.00	-0.15	1.112	**0.474**	**0.527**
4233/846.6	RMC	Left side	23.54	24.00	0.06	1.112	0.142	0.158
4233/846.6	RMC	Right side	23.54	24.00	-0.19	1.112	0.133	0.148
4233/846.6	RMC	Bottom side	23.54	24.00	0.07	1.112	0.388	0.431

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ⩽ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ⩽ 100MHz.
- ⩽ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ⩽ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ⩾ 200 MHz.

3) RMC* - RMC 12.2kbps mode;

7.3.5. SAR Results [LTE Band 2]

SAR Values [LTE Band 2]									
Ch/ Freq. (MHz)	BW.	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
								Measured	Reported
measured / reported SAR numbers – Head <1RB>									
19100/1900	20M	QPSK 1RB_49	Left Cheek	22.65	23.00	-0.15	1.084	0.096	0.104
19100/1900	20M	QPSK 1RB_49	Left Tilt	22.65	23.00	-0.06	1.084	0.069	0.075
19100/1900	20M	QPSK 1RB_49	Right Cheek	22.65	23.00	-0.14	1.084	**0.105**	**0.114**
19100/1900	20M	QPSK 1RB_49	Right Tilt	22.65	23.00	-0.09	1.084	0.062	0.067
measured / reported SAR numbers – Head <50%RB>									
19100/1900	20M	QPSK 50RB_50	Left Cheek	21.68	22.00	-0.15	1.076	0.069	0.075
19100/1900	20M	QPSK 50RB_50	Left Tilt	21.68	22.00	0.07	1.076	0.050	0.054
19100/1900	20M	QPSK 50RB_50	Right Cheek	21.68	22.00	0.17	1.076	0.076	0.082
19100/1900	20M	QPSK 50RB_50	Right Tilt	21.68	22.00	0.15	1.076	0.045	0.048
measured / reported SAR numbers - Body Test data distance 5mm<1RB>									
19100/1900	20M	QPSK 1RB_49	Front side	22.65	23.00	0.04	1.084	0.181	0.196
19100/1900	20M	QPSK 1RB_49	Rear side	22.65	23.00	-0.17	1.084	**0.222**	**0.241**
19100/1900	20M	QPSK 1RB_49	Left side	22.65	23.00	0.02	1.084	0.115	0.125
19100/1900	20M	QPSK 1RB_49	Right side	22.65	23.00	-0.01	1.084	0.106	0.115
19100/1900	20M	QPSK 1RB_49	Bottom side	22.65	23.00	0.15	1.084	0.175	0.190
measured / reported SAR numbers - Body Test data distance 5mm<50%RB>									
19100/1900	20M	QPSK 50RB_50	Front side	21.68	22.00	-0.03	1.076	0.154	0.166
19100/1900	20M	QPSK 50RB_50	Rear side	21.68	22.00	0.04	1.076	0.189	0.203
19100/1900	20M	QPSK 50RB_50	Left side	21.68	22.00	-0.01	1.076	0.074	0.080
19100/1900	20M	QPSK 50RB_50	Right side	21.68	22.00	0.02	1.076	0.066	0.071
19100/1900	20M	QPSK 50RB_50	Bottom side	21.68	22.00	-0.16	1.076	0.144	0.155

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

7.3.6. SAR Results [LTE Band 4]

SAR Values [LTE Band 4]									
Ch/ Freq. (MHz)	BW.	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
								Measured	Reported
measured / reported SAR numbers – Head<1RB>									
20300/1745	20M	QPSK 1RB_99	Left Cheek	22.50	23.00	0.15	1.122	0.355	0.398
20300/1745	20M	QPSK 1RB_99	Left Tilt	22.50	23.00	-0.04	1.122	0.153	0.172
20300/1745	20M	QPSK 1RB_99	Right Cheek	22.50	23.00	-0.19	1.122	**0.388**	**0.435**
20300/1745	20M	QPSK 1RB_99	Right Tilt	22.50	23.00	-0.16	1.122	0.174	0.195
measured / reported SAR numbers – Head<50%RB>									
20300/1745	20M	QPSK 50RB_50	Left Cheek	21.53	22.00	-0.04	1.114	0.302	0.337
20300/1745	20M	QPSK 50RB_50	Left Tilt	21.53	22.00	0.02	1.114	0.130	0.145
20300/1745	20M	QPSK 50RB_50	Right Cheek	21.53	22.00	-0.03	1.114	0.330	0.368
20300/1745	20M	QPSK 50RB_50	Right Tilt	21.53	22.00	0.18	1.114	0.148	0.165
measured / reported SAR numbers - Body Test data distance 5mm<1RB>									
20300/1745	20M	QPSK 1RB_99	Front side	22.50	23.00	0.15	1.122	0.353	0.396
20300/1745	20M	QPSK 1RB_99	Rear side	22.50	23.00	0.07	1.122	**0.431**	**0.484**
20300/1745	20M	QPSK 1RB_99	Left side	22.50	23.00	0.02	1.122	0.174	0.195
20300/1745	20M	QPSK 1RB_99	Right side	22.50	23.00	-0.17	1.122	0.166	0.186
20300/1745	20M	QPSK 1RB_99	Bottom side	22.50	23.00	0.09	1.122	0.344	0.386
measured / reported SAR numbers - Body Test data distance 5mm<50%RB>									
20300/1745	20M	QPSK 50RB_50	Front side	21.53	22.00	-0.04	1.114	0.300	0.334
20300/1745	20M	QPSK 50RB_50	Rear side	21.53	22.00	0.15	1.114	0.366	0.408
20300/1745	20M	QPSK 50RB_50	Left side	21.53	22.00	-0.11	1.114	0.132	0.147
20300/1745	20M	QPSK 50RB_50	Right side	21.53	22.00	-0.15	1.114	0.125	0.139
20300/1745	20M	QPSK 50RB_50	Bottom side	21.53	22.00	0.04	1.114	0.289	0.322

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

7.3.7. SAR Results [LTE Band 5]

SAR Values [LTE Band 5]									
Ch/ Freq. (MHz)	BW.	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
								Measured	Reported
measured / reported SAR numbers – Head<1RB>									
20525/836.5	10M	QPSK 1RB_49	Left Cheek	23.53	24.00	-0.04	1.114	0.273	0.304
20525/836.5	10M	QPSK 1RB_49	Left Tilt	23.53	24.00	-0.08	1.114	0.118	0.131
20525/836.5	10M	QPSK 1RB_49	Right Cheek	23.53	24.00	0.05	1.114	**0.298**	**0.332**
20525/836.5	10M	QPSK 1RB_49	Right Tilt	23.53	24.00	-0.03	1.114	0.134	0.149
measured / reported SAR numbers – Head<50%RB>									
20600/844	10M	QPSK 25RB_25	Left Cheek	22.73	23.00	-0.18	1.064	0.189	0.201
20600/844	10M	QPSK 25RB_25	Left Tilt	22.73	23.00	0.18	1.064	0.101	0.106
20600/844	10M	QPSK 25RB_25	Right Cheek	22.73	23.00	0.16	1.064	0.255	0.271
20600/844	10M	QPSK 25RB_25	Right Tilt	22.73	23.00	-0.13	1.064	0.114	0.121
measured / reported SAR numbers - Body Test data distance 5mm<1RB>									
20525/836.5	10M	QPSK 1RB_49	Front side	23.53	24.00	0.03	1.114	0.370	0.412
20525/836.5	10M	QPSK 1RB_49	Rear side	23.53	24.00	-0.02	1.114	**0.452**	**0.504**
20525/836.5	10M	QPSK 1RB_49	Left side	23.53	24.00	-0.07	1.114	0.198	0.221
20525/836.5	10M	QPSK 1RB_49	Right side	23.53	24.00	0.15	1.114	0.191	0.213
20525/836.5	10M	QPSK 1RB_49	Bottom side	23.53	24.00	0.14	1.114	0.361	0.402
measured / reported SAR numbers - Body Test data distance 5mm<50%RB>									
20600/844	10M	QPSK 25RB_25	Front side	22.73	23.00	0.01	1.064	0.321	0.342
20600/844	10M	QPSK 25RB_25	Rear side	22.73	23.00	-0.08	1.064	0.392	0.417
20600/844	10M	QPSK 25RB_25	Left side	22.73	23.00	-0.09	1.064	0.110	0.117
20600/844	10M	QPSK 25RB_25	Right side	22.73	23.00	0.6	1.064	0.105	0.112
20600/844	10M	QPSK 25RB_25	Bottom side	22.73	23.00	0.02	1.064	0.312	0.332

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

7.3.8. SAR Results [LTE Band 7]

SAR Values [LTE Band 7]									
Ch/ Freq. (MHz)	BW.	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR_{1-g} results(W/kg)	
								Measured	Reported
measured / reported SAR numbers – Head <1RB>									
21100/2535.5	20M	QPSK 1RB_49	Left Cheek	22.03	23.00	-0.08	1.250	0.320	0.400
21100/2535.5	20M	QPSK 1RB_49	Left Tilt	22.03	23.00	-0.07	1.250	0.242	0.303
21100/2535.5	20M	QPSK 1RB_49	Right Cheek	22.03	23.00	0.01	1.250	**0.331**	**0.414**
21100/2535.5	20M	QPSK 1RB_49	Right Tilt	22.03	23.00	-0.04	1.250	0.248	0.31
measured / reported SAR numbers – Head <50%RB>									
21100/2535.5	20M	QPSK 50RB_25	Left Cheek	21.23	22.00	-0.07	1.194	0.270	0.322
21100/2535.5	20M	QPSK 50RB_25	Left Tilt	21.23	22.00	-0.15	1.194	0.204	0.244
21100/2535.5	20M	QPSK 50RB_25	Right Cheek	21.23	22.00	0.04	1.194	0.280	0.334
21100/2535.5	20M	QPSK 50RB_25	Right Tilt	21.23	22.00	0.11	1.194	0.209	0.25
measured / reported SAR numbers - Body Test data distance 5mm<1RB>									
21100/2535.5	20M	QPSK 1RB_49	Front side	22.03	23.00	-0.06	1.250	0.440	0.550
21100/2535.5	20M	QPSK 1RB_49	Rear side	22.03	23.00	-0.10	1.250	**0.589**	**0.736**
21100/2535.5	20M	QPSK 1RB_49	Left side	22.03	23.00	0.02	1.250	0.214	0.268
21100/2535.5	20M	QPSK 1RB_49	Right side	22.03	23.00	-0.10	1.250	0.206	0.258
21100/2535.5	20M	QPSK 1RB_49	Bottom side	22.03	23.00	0.03	1.250	0.436	0.545
measured / reported SAR numbers - Body Test data distance 5mm<50%RB>									
21100/2535.5	20M	QPSK 50RB_25	Front side	21.23	22.00	-0.05	1.194	0.372	0.444
21100/2535.5	20M	QPSK 50RB_25	Rear side	21.23	22.00	0.08	1.194	0.497	0.593
21100/2535.5	20M	QPSK 50RB_25	Left side	21.23	22.00	-0.06	1.194	0.133	0.159
21100/2535.5	20M	QPSK 50RB_25	Right side	21.23	22.00	0.17	1.194	0.129	0.154
21100/2535.5	20M	QPSK 50RB_25	Bottom side	21.23	22.00	0.15	1.194	0.365	0.436

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

Multiple Transmitter Evaluation

7.3.9. Simultaneous SAR SAR test evaluation

Simultaneous Transmission Possibilities

NO.	Simultaneous Tx Combination	Head	Body
1	GSM Voice + BT	Yes	Yes
2	GSM DATA + BT	Yes	Yes
7	UMTS + BT	Yes	Yes
10	LTE + BT	Yes	Yes

7.3.10. Estimated SAR

When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

• (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Estimated SAR Result

Freq. Band	Frequency (GHz)	Test Position	max. power (dBm)	max. power (mw)	Test Separation (mm)	Estimated 1g SAR (W/kg)
Bluetooth	2.48	Head	2.00	1.58	5	0.067
		Body-worn	2.00	1.58	5	0.067

7.3.11. Simultaneous Transmission SAR Summation Scenario

Test position		Main Antenna SARmax (W/kg)								BT/WIFI Antenna SARmax (W/kg)	Summed 1g SARmax (W/kg)
		GSM 850	GSM 1900	WCDMA Band II	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	BT	
Head	Left cheek	0.296	0.187	0.145	0.307	0.114	0.435	0.332	0.414	0.067	**0.502**
	Left tilted	0.159	0.098	0.08	0.158	0.067	0.195	0.149	0.31	0.067	0.377
	Right cheek	0.275	0.173	0.137	0.27	0.104	0.398	0.304	0.4	0.067	0.467
	Right tilted	0.144	0.089	0.075	0.177	0.075	0.172	0.131	0.303	0.067	0.37
Body-worn 5mm	Front side	0.421	0.185	0.193	0.44	0.196	0.396	0.412	0.55	0.067	0.617
	Back side	0.539	0.34	0.268	0.527	0.241	0.484	0.504	0.736	0.067	**0.803**
	Left side	0.172	0.074	0.096	0.158	0.125	0.195	0.221	0.268	0.067	0.335
	Right side	0.163	0.068	0.090	0.148	0.115	0.186	0.213	0.258	0.067	0.325
	Bottom side	0.412	0.176	0.183	0.431	0.190	0.386	0.402	0.545	0.067	0.612

APPENDIX A: DETAILED SYSTEM CHECK RESULTS

APPENDIX B: DETAILED TEST RESULTS

APPENDIX C: CALIBRATION CERTIFICATE

APPENDIX D: PHOTOGRAPHS

.....The End of Test Report.....